

IN THE CLAIMS:

1. (Currently Amended) An extractor for extracting a straight pin or another component with a cylinder section that is pressed into a hole and protrudes from the hole, the extractor comprising:

a cylindrical section with a gripping element having a tubular basic body;

5 a guide tube, said tubular basic body being non-rotatably and axially adjustable in said guide tube;

a set of gripping jaws provided at an outer end of said tubular basic body, said gripping jaws having a conical outer jacket surface[[s]] and an inner circular perimeter, said gripping jaws [[for]] attaching said gripping element to said straight pin or said cylindrical section of said  
10 component; ~~; said basic body being pulled~~

a pulling spindle for pulling said basic body axially into said guide tube, for pressing said gripping jaws ~~are pressed radially inwardly~~ by said conical jacket surfaces in cooperation with said guide tube, ~~so that~~ for a snug hold of said gripping jaws at said straight pin or said cylindrical section is brought about;

15 a mechanical adjusting drive operated separately from said pulling spindle; and  
~~an extractor with~~ a support tube that is arranged directly on ~~can be pushed over~~ said guide tube and is axially adjustable in relation to said guide tube by means of said mechanical adjusting drive in an axial adjustment, said support tube being supported axially ~~indirectly or~~ directly in an area surrounding said straight pin during [[the]] said axial adjustment.

2. (Currently Amended) An extractor in accordance with claim 1, wherein ~~[[the]]~~ said mechanical adjusting drive is formed by at least one eccentric lever provided with a cam plate actuated manually and mounted pivotably for a pivoting movement at said support tube ~~[[and]]~~ wherein said cam plate is supported axially at ~~an axially~~ a radially protruding support flange of  
5 said guide tube during ~~[[the]]~~ said pivoting movement of said eccentric lever.

3. (Currently Amended) An extractor in accordance with claim 1, wherein for direct support at said component in an area surrounding said straight pin, a length of said support tube is adapted to a length of said guide tube such that said support tube ends approximately flush with said guide tube in its axial starting position with said adjusting drive not actuated.

4. (Currently Amended) An extractor in accordance with claim 1, ~~wherein said~~ further comprising an annular adapter~~[[s]]~~ can be pushed axially over said support tube and ~~[[are]]~~ provided for ~~[[the]]~~ an indirect support of said support tube in an area surrounding the straight pin.

5. (Currently Amended) An extractor in accordance with claim 1, wherein a length of said support tube is considerably shorter than a length of said guide tube and a support frame is provided as an adapter together with a support ring through which said guide tube passes axially to said straight pin or another component to be extracted during use, and said extractor  
5 is supported axially via said support ring and said support frame ~~at said component into which~~

~~said component is inserted.~~

6. (Currently Amended) An extractor in accordance with claim 5, wherein one said support ring or more ~~[[said]]~~ intermediate rings of equal or different axial length is/are provided, via which a length of said guide tube that passes through said support ring can be set to different values.

7. (Currently Amended) An extractor in accordance with claim ~~[[1]]~~ 2, wherein said support tube ~~is provided at~~ comprises an end of said support tube located toward said guide tube with a bearing flange located toward said guide tube, in which said eccentric lever or eccentric levers is/are mounted pivotably in said bearing flange, and one or more ~~[[said]]~~ tension springs, by which said guide tube is reset into ~~[[its]]~~ a starting position during ~~[[the]]~~ a release of said eccentric levers in said support tube, is/are provided between said support flange of said guide tube and said bearing flange of said support tube.

8. (Currently Amended) An extractor in accordance with claim 1, ~~further comprising:~~  
~~a pulling spindle for pulling said basic body into said guide tube,~~ wherein said pulling spindle ~~[[being]]~~ is provided at one of ~~[[its]]~~ a spindle end~~[[s]]~~ with ~~[[a]]~~ an external thread with which and said pulling spindle engages an internal thread of said basic body with said external thread for ~~[[the]]~~ said axial adjustment of said basic body in said guide tube and said threaded pulling spindle is mounted axially snugly and rotatably in said guide tube in a head part of said

guide tube ~~which is located~~ at a location axially opposite said basic body.

9. (Currently Amended) An extractor in accordance with claim 8, wherein said pulling spindle has a wrench profile protruding axially from said guide tube at ~~[[its]]~~ another spindle end located opposite said gripping element and a knurled head is fastenable in an axial extension to said wrench profile.

10. (Currently Amended) An extractor in accordance with claim 8, further comprising:  
a ratchet which ~~can be~~ is reversed for rotation to the right and for rotation to the left and is captively secured on said wrench profile.

11. (Currently Amended) An extractor in accordance with claim 1, further comprising ~~further and~~ a set of different gripping elements with a set of associated gripping jaws of different designs, which can be arranged interchangeably with one another in said guide tube, said different gripping jaws being provided with ~~[[said]]~~ a set of radially inwardly directed clamping surfaces forming an approximately round hollow cylinder of different diameters interrupted in ~~[[the]]~~ a circumferential direction in a non-tensioned starting position.

12. (Currently Amended) An extractor in accordance with claim 10, wherein said clamping surfaces of said associated gripping jaws have different surface structures and are optionally provided with a set of internal teeth or with a hard metal surface coating.

13. (Currently Amended) An extractor in accordance with claim 1, wherein said gripping jaws are provided with an axial extension section[[s]] axially protruding over said guide tube by several mm, and a larger recess is provided in an area of at least one of [[said]] a set of longitudinal slots separating said gripping jaws together with said extension sections.

14. (New) An extractor comprising:

a cylindrical section with a tubular body having a sectional top and a sectional bottom along an axis, including an inner thread at said sectional top, said sectional bottom shaped to form an expanding outer conical jacket surface and including a plurality of inner gripping jaws  
5 at said sectional bottom to grab a straight pin protruding from a hole;

an inner pulling spindle with an elongated body having a spindle top and a spindle bottom along said axis with an outer thread at said spindle bottom for interlocking with said inner thread and a radially protruding support flange at a perimeter of said spindle top;

a guide tube with an inner elongated guide along said axis, said guide tube having a  
10 tubular top, a tubular bottom, a circular seating around an inner perimeter of said tubular top for fitting said inner pulling spindle at said tubular top with said circular seating preventing said protruding support flange from dropping further, a cylindrical spacing around another inner perimeter of said tubular bottom for fitting said cylindrical section and allowing said inner pulling spindle to axially pull said cylindrical section into said guide tube and glide said  
15 cylindrical section along said inner elongated tubular guide, an outer support flange around an outer surface of said guide tube and a first adjusting element adjacent said outer support flange;

a support tube with a tubular shape slidable along said outer surface along said axis, said support tube having a support tube top and a support tube bottom, an annular front surface at said support tube bottom and a second adjusting element at said support tube top, wherein at least one of said first adjusting element and said second adjusting element is a mounting cam means and the other adjusting means is a pushing support; and

an eccentric lever pivotally mounted on said cam means and pushing against said pushing support to push said annular front surface against a perimeter around said hole as said plurality of inner gripping jaws grasps and pulls said straight pin away from said hole.

15. (New) The extractor according to claim 14, wherein said plurality of inner gripping jaws are pressed radially inwardly by said conical jacket surfaces in cooperation with said guide tube, so that a snug hold of said gripping jaws at said straight pin or a circular section is brought about.

16. (New) The extractor according to claim 14, wherein a length of said support tube is considerably shorter than a length of said guide tube and a support frame is provided as an adapter together with a support ring through which said guide tube passes axially to said straight pin or another component to be extracted during use, and said extractor is supported axially via said support ring and said support frame.

17. (New) The extractor according to claim 16, wherein one said support ring of equal

or different axial length is provided, via which a length of said guide tube that passes through said support ring can be set to different values.

18. (New) The extractor according to claim 14, wherein said support tube comprises an end with a bearing flange located toward said guide tube, said eccentric lever is mounted pivotally in said bearing flange, and one or more tension springs, by which said guide tube is reset into a starting position during a release of said eccentric lever in said support tube, is provided between said support flange of said guide tube and said bearing flange of said support tube.

19. (New) A method of extracting a straight pin, said method comprising:  
providing a cylindrical section with a tubular body having a sectional top and a sectional bottom along an axis, including an inner thread at said sectional top, said sectional bottom shaped to form an expanding outer conical jacket surface and including a plurality of inner gripping jaws at said sectional bottom;

grabbing a straight pin protruding from a hole using said plurality of inner gripping jaws;

providing a guide tube with an inner elongated guide along said axis, said guide tube having a tubular top, a tubular bottom, a circular seating around an inner perimeter of said tubular top, a cylindrical spacing around another inner perimeter of said tubular bottom for fitting said cylindrical section, an outer support flange around an outer surface of said guide tube and a first adjusting element adjacent said outer support flange;



inserting an inner pulling spindle into top of said guide tube, said inner pulling spindle having an elongated body with a spindle top and a spindle bottom along said axis with an outer thread at said spindle bottom for interlocking with said inner thread and a radially protruding support flange at a perimeter of said spindle top for fitting said inner pulling spindle at said tubular top with said circular seating preventing said protruding support flange from dropping further;

interlocking said inner pulling spindle with said cylindrical section using said threads; providing a support tube with a tubular shape slidable along said outer surface along said axis, said support tube having a support tube top and a support tube bottom, an annular front surface at said support tube bottom and a second adjusting element at said support tube top, wherein at least one of said first adjusting element and said second adjusting element is a mounting cam means and the other adjusting means is a pushing support;

providing an eccentric lever pivotally mounted on said cam means and pushing against said pushing support to push said annular front surface against a perimeter around said hole as said plurality of inner gripping jaws grasps and pulls said straight pin away from said hole; and

pressing down said eccentric lever to push up said guide tube along with said inner pulling spindle to axially pull said cylindrical section into said guide tube and glide said cylindrical section along said inner elongated tubular guide, thereby allowing said plurality of inner gripping jaws to grasp and pull said straight pin away from said hole.

20. (New) The extractor according to claim 19, wherein said support tube comprises



an end with a bearing flange located toward said guide tube, said eccentric lever is mounted pivotally in said bearing flange, and one or more tension springs, by which said guide tube is reset into a starting position during a release of said eccentric levers in said support tube, is provided between said support flange of said guide tube and said bearing flange of said support tube.

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